

111TH CONGRESS
1ST SESSION

H. R. 1144

To increase awareness of the existence of and to overcome gender bias in academic science and engineering through research and training, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 24, 2009

Ms. EDDIE BERNICE JOHNSON of Texas (for herself, Ms. EDWARDS of Maryland, Mr. REYES, Mrs. DAHLKEMPER, Mr. MILLER of North Carolina, Mr. CARSON of Indiana, Mr. WILSON of Ohio, and Mr. GRAYSON) introduced the following bill; which was referred to the Committee on Science and Technology

A BILL

To increase awareness of the existence of and to overcome gender bias in academic science and engineering through research and training, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Fulfilling the Potential
5 of Women in Academic Science and Engineering Act”.

6 **SEC. 2. FINDINGS.**

7 The Congress finds the following:

1 (1) In its 2007 report, *Beyond Bias and Bar-*
2 *riers*, the National Academies state that, to maintain
3 its scientific and engineering leadership amid in-
4 creasing economic and educational globalization, the
5 United States must aggressively pursue the innova-
6 tive capacity of all of its people—women and men.

7 (2) Women make up an increasing proportion
8 of science and engineering majors at all institutions
9 of higher education, including at top-rated programs
10 such as those at the Massachusetts Institute of
11 Technology where women make up 51 percent of its
12 science undergraduates and 35 percent of its engi-
13 neering undergraduates.

14 (3) Despite this progress, however, women still
15 receive only 20 percent of all bachelor’s degrees
16 awarded in engineering and physics.

17 (4) For women to participate to their full po-
18 tential across all science and engineering fields, they
19 must see a career path that allows them to reach
20 their full intellectual potential; much remains to be
21 done to achieve that goal.

22 (5) The Federal Government provides over 60
23 percent of research funding at institutions of higher
24 education.

1 (6) Women are a small portion of the science
2 and engineering faculty members at major research
3 universities, and they typically receive fewer institu-
4 tional resources for their research activities than
5 their male colleagues.

6 (7) Unintentional biases and outmoded institu-
7 tional structures are hindering the access and ad-
8 vancement of women in science and engineering.

9 (8) Women hold a small portion of leadership
10 positions in our institutions of higher education, sci-
11 entific and professional societies, and honorary orga-
12 nizations.

13 (9) Neither our institutions of higher education
14 nor our Nation can afford such underuse of precious
15 human capital in science and engineering.

16 **SEC. 3. DEFINITIONS.**

17 In this Act, the following definitions shall apply:

18 (1) **DIRECTOR.**—The term “Director” means
19 the Director of the Office of Science and Technology
20 Policy in the Executive Office of the President, act-
21 ing through the National Science and Technology
22 Council.

23 (2) **FEDERAL SCIENCE AGENCY.**—The term
24 “Federal science agency” means any Federal agency
25 that is responsible for at least 2 percent of the total

1 Federal obligation for research and development at
2 institutions of higher education, according to the
3 most recent data available from the National Science
4 Foundation.

5 (3) INSTITUTION OF HIGHER EDUCATION.—The
6 term “institution of higher education” has the
7 meaning given such term in section 101(a) of the
8 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

9 **SEC. 4. WORKSHOPS TO ENHANCE GENDER EQUITY IN Aca-**
10 **DEMIC SCIENCE AND ENGINEERING.**

11 (a) IN GENERAL.—Not later than 6 months after the
12 date of enactment of this Act, the Director shall develop
13 a uniform policy for each Federal science agency to carry
14 out a program of workshops that educate program offi-
15 cers, members of grant review panels, institution of higher
16 education mathematics, science, and engineering depart-
17 ment chairs, and other federally funded researchers about
18 methods that minimize the effects of gender bias in eval-
19 uation of Federal research grants and in the related aca-
20 demic advancement of actual and potential recipients of
21 these grants including hiring, tenure, promotion, and se-
22 lection for any honor based in part on the recipient’s re-
23 search record.

24 (b) INTERAGENCY COORDINATION.—The Director
25 shall ensure that programs of workshops across the Fed-

1 eral science agencies are coordinated and supported jointly
2 as appropriate. As part of this process, the Director shall
3 ensure that at least 1 workshop is supported every 2 years
4 among the Federal science agencies in each of the major
5 science and engineering disciplines supported by those
6 agencies.

7 (c) SCIENTIFIC AND PROFESSIONAL SOCIETIES.—
8 Federal science agencies may carry out the program of
9 workshops under this section by making grants to eligible
10 organizations. In addition to any other organizations made
11 eligible by the Federal science agencies, the following orga-
12 nizations are eligible for grants under this section:

13 (1) Nonprofit scientific and professional soci-
14 eties and organizations that represent one or more
15 science and engineering disciplines.

16 (2) Nonprofit organizations that have the pri-
17 mary mission of advancing the participation of
18 women in science and engineering.

19 (d) CHARACTERISTICS OF WORKSHOPS.—The work-
20 shops shall have the following characteristics:

21 (1) Invitees to workshops shall include at
22 least—

23 (A) the chairs of departments in the rel-
24 evant discipline from at least the top 50 institu-
25 tions of higher education, as determined by the

1 amount of Federal research and development
2 funds obligated to each institution of higher
3 education in the prior year based on data avail-
4 able from the National Science Foundation;

5 (B) members of any standing research
6 grant review panel appointed by the Federal
7 science agencies in the relevant discipline;

8 (C) in the case of major science and engi-
9 neering disciplines supported by the Depart-
10 ment of Energy, the individuals from each of
11 the Department of Energy National Labora-
12 tories with personnel management responsibil-
13 ities comparable to those of an institution of
14 higher education department chair; and

15 (D) Federal science agency program offi-
16 cers in the relevant discipline, other than pro-
17 gram officers that participate in comparable
18 workshops organized and run specifically for
19 that agency's program officers.

20 (2) Activities at the workshops shall include re-
21 search presentations and interactive discussions or
22 other activities that increase the awareness of the
23 existence of gender bias in the grant-making process
24 and the development of the academic record nec-
25 essary to qualify as a grant recipient including re-

1 cruitment, hiring, tenure review, promotion, and
2 other forms of formal recognition of individual
3 achievement and provide strategies to overcome such
4 bias.

5 (3) Research presentations and other workshop
6 programs, as appropriate, shall include a discussion
7 of the unique challenges faced by women from his-
8 torically underrepresented groups.

9 (4) Workshop programs shall include informa-
10 tion on best practices and the value of mentoring
11 undergraduate and graduate women students as well
12 as outreach to girls earlier in their science, tech-
13 nology, engineering, and mathematics education.

14 (e) REPORT.—

15 (1) IN GENERAL.—Not later than 5 years after
16 the date of enactment of this Act, the Director shall
17 transmit to the Committee on Science and Tech-
18 nology of the House of Representatives and the
19 Committee on Commerce, Science, and Transpor-
20 tation of the Senate a report evaluating the impact
21 of the program carried out under this section to re-
22 duce gender bias towards women engaged in re-
23 search funded by the Federal Government. The Di-
24 rector shall include in this report any recommenda-

1 tions for improving the evaluation process described
2 in paragraph (2).

3 (2) MINIMUM CRITERIA FOR EVALUATION.—In
4 determining the effectiveness of the program, the
5 Director shall consider, at a minimum—

6 (A) the rates of participation by invitees in
7 the workshops authorized under this section;

8 (B) the results of attitudinal surveys con-
9 ducted on workshop participants before and
10 after the workshops;

11 (C) any institutional policy or practice
12 changes reported by participants from institu-
13 tions of higher education; and

14 (D) for institution of higher education de-
15 partment chairs and Department of Energy Na-
16 tional Laboratory employees who participated in
17 at least 1 workshop 3 or more years prior to
18 the due date for the report, trends in the data
19 for the department represented by the chair or
20 employee including—

21 (i) the number and percent of women
22 faculty;

23 (ii) the number and percent of women
24 in tenure-track positions by rank;

1 (iii) tenure promotion outcomes by
2 gender;

3 (iv) years in rank by gender;

4 (v) time at institution by gender;

5 (vi) attrition by gender;

6 (vii) the number of women who are in
7 nontenure-track positions, including teach-
8 ing and research;

9 (viii) the number and percent of
10 women faculty in endowed or named
11 chairs; and

12 (ix) the number and percent of women
13 faculty on promotion and tenure commit-
14 tees.

15 (f) MINIMIZING COSTS.—To the extent practicable,
16 workshops shall be held in conjunction with national or
17 regional disciplinary meetings to minimize costs associated
18 with participant travel.

19 (g) AUTHORIZATION OF APPROPRIATIONS.—Each
20 Federal science agency is authorized to contribute funds,
21 from funds which are otherwise authorized, to support the
22 workshop and evaluation requirements under this section,
23 including—

1 (1) providing grants to organizations, including
2 the organizations identified under subsection (c), to
3 plan and organize the workshops; and

4 (2) reimbursing the travel and lodging costs of
5 invited speakers and workshop participants.

6 **SEC. 5. EXTENDED RESEARCH GRANT SUPPORT AND IN-**
7 **TERIM TECHNICAL SUPPORT FOR CARE-**
8 **GIVERS.**

9 (a) **POLICIES FOR CAREGIVERS.**—Not later than 6
10 months after the date of enactment of this Act, the Direc-
11 tor shall develop a uniform policy to—

12 (1) extend the period of grant support for fed-
13 erally funded researchers who have caregiving re-
14 sponsibilities; and

15 (2) provide funding for interim technical staff
16 support for federally funded researchers who take a
17 leave of absence for caregiving responsibilities.

18 (b) **REPORT.**—Upon developing the policy required
19 under subsection (a), the Director shall transmit a copy
20 of the policy to the Committee on Science and Technology
21 of the House of Representatives and to the Committee on
22 Commerce, Science, and Transportation of the Senate.

1 **SEC. 6. COLLECTION OF DATA ON FEDERAL RESEARCH**
2 **GRANTS.**

3 (a) IN GENERAL.—Each Federal science agency shall
4 collect standardized annual composite information on de-
5 mographics, field, award type and budget request, review
6 score, and funding outcome for all applications for re-
7 search and development grants to institutions of higher
8 education supported by that agency.

9 (b) REPORTING OF DATA.—

10 (1) The Director shall establish a policy to en-
11 sure uniformity and standardization of data collec-
12 tion required under subsection (a).

13 (2) Not later than 2 years after the date of en-
14 actment of this Act, and annually thereafter, each
15 Federal science agency shall submit data collected
16 under subsection (a) to the National Science Foun-
17 dation.

18 (3) The National Science Foundation shall be
19 responsible for storing and publishing all of the
20 grant data submitted under paragraph (2) in con-
21 junction with the biennial report required under sec-
22 tion 37 of the Science and Engineering Equal Op-
23 portunities Act (42 U.S.C. 1885d).

1 **SEC. 7. PUBLICATION OF LIST OF INSTITUTIONAL PARTICI-**
2 **PATION IN WORKSHOPS TO ENHANCE GEN-**
3 **DER EQUITY IN ACADEMIC SCIENCE AND EN-**
4 **GINEERING.**

5 The Director, on the basis of data reported by the
6 Federal science agencies, shall publish annually a list of
7 institutions of higher education science and engineering
8 departments represented by individuals who attend the
9 workshops described in section 4. The list shall be publicly
10 available through the website of the Office of Science and
11 Technology Policy. Any institution of higher education
12 science and engineering department that is publicized on
13 the list may publicize its receipt of such recognition on
14 its website, in printed materials, or through other means.

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